

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/007613

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ H01Q13/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ H01Q13/02, H01Q15/23, H01Q19/06, H01Q19/10Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004
Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2003/30303 A1 (Sumitomo Electric Industries, Ltd.), 11 April, 2003 (11.04.03), Full text; Figs. 1 to 25 & JP 2003-110349 A & JP 2003-110350 A & JP 2003-110352 A	1-10
Y	JP 10-163730 A (Murata Mfg. Co., Ltd.), 19 June, 1998 (19.06.98), Full text; Figs. 1 to 11 (Family: none)	1-10
Y	JP 2002-232230 A (Toshiba Corp.), 16 August, 2002 (16.08.02), Full text; Figs. 1 to 10 (Family: none)	1-10

 Further documents are listed in the continuation of Box C. See patent family annex.

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- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
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- "P" document published prior to the international filing date but later than the priority date claimed
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- "&" document member of the same patent family

Date of the actual completion of the international search
21 July, 2004 (21.07.04)Date of mailing of the international search report
03 August, 2004 (03.08.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 6-504659 A (Thomson Consumer Electronics S.A.), 26 May, 1994 (26.05.94), Full text; Figs. 1 to 3 & WO 92/13373 A1 & EP 569390 A	1-10
Y	JP 11-27037 A (Nippon Antena Kabushiki Kaisha), 29 January, 1999 (29.01.99), Full text; Figs. 1 to 11 (Family: none)	1-10
Y	JP 2001-284950 A (Alps Electric Co., Ltd.), 12 October, 2001 (12.10.01), Full text; Figs. 1 to 7 & JP 2001-284956 A & EP 1139489 A1 & US 6580400 B2	1-10
Y	US 4468672 A (Bell Telephone Laboratories, Inc.), 28 August, 1984 (28.08.84), Full text; Figs. 3, 4 & US 4482899 A & WO 83/1711 A & JP 58-501851 A	1-10
Y	JP 53-146557 A (Nippon Telegraph & Telephone Public Corp.), 20 December, 1978 (20.12.78), Full text; Figs. 1 to 8 (Family: none)	1-10
Y	JP 57-55321 B2 (Nippon Telegraph & Telephone Public Corp.), 24 November, 1982 (24.11.82), Full text; Figs. 1 to 8 (Family: none)	1-10
Y	JP 2001-68919 A (DX Antenna Co., Ltd.), 16 March, 2001 (16.03.01), Full text; Figs. 1 to 11 (Family: none)	7
Y	JP 5-308220 A (Mitsubishi Electric Corp.), 19 November, 1993 (19.11.93), Full text; Figs. 1 to 4 (Family: none)	7
Y	JP 59-94902 A (NEC Corp.), 31 May, 1984 (31.05.84), Full text; Figs. 1 to 12 (Family: none)	7
Y	JP 4-74005 A (Sumitomo Electric Industries, Ltd.), 09 March, 1992 (09.03.92), Full text; Figs. 1 to 5 (Family: none)	10